

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-37 (Canceled).

Claim 38 (Previously Presented): A method for the production of a powder comprising essentially spherical particles of an aromatic polyether ketone plastic, comprising:
mixing a matrix micropowder into a liquid phase to form a suspension wherein the particle size of the matrix micropowder is less than the particle size of the powder;
spraying the suspension through a nozzle to form droplets comprising the matrix micropowder; and
vaporizing or evaporating a liquid component from the droplets to form the powder in the form of essentially spherical agglomerates.

Claim 39 (Previously Presented): The method according to Claim 38, wherein the liquid phase is further mixed with at least one of a reinforcing fiber or a stiffening fiber having a length less than the particle size of the powder.

Claim 40 (Previously Presented): The method according to Claim 38, wherein the matrix micropowder has an average grain size d_{50} between 3 and 10 μm .

Claim 41 (Previously Presented): The method according to Claim 38, wherein the matrix micropowder has an average grain size d_{50} of 5 μm .

Claim 42 (Previously Presented): The method of Claim 39, wherein the fibers have an average length L_{50} of 20 to 150 μm .

Claim 43 (Previously Presented): The method according to Claim 39, wherein the fibers have an average length L_{50} of 40 to 70 μm .

Claim 44 (Previously Presented): The method according to Claim 39, wherein the matrix micropowder has an average grain size d_{50} between 3 and 10 μm and the fibers have an average length L_{50} of 10 to 100 μm .

Claim 45 (Previously Presented): The method according to Claim 39, wherein the matrix micropowder has an average grain size d_{50} of 5 μm and the fibers have an average length L_{50} of 10 to 80 μm .

Claim 46 (Previously Presented): The method according to Claim 38, wherein the droplets have an average diameter d_{50} of 10 to 70 μm .

Claim 47 (Previously Presented): The method according to Claim 38, wherein the vaporizing or evaporating is carried out while the droplets are moving through a heating segment.

Claim 48 (Previously Presented): A method for the production of a powder comprising a first component in the form of essentially spherical powder particle and at least one of a stiffening fiber or a reinforcing fiber, wherein the first component comprises a matrix material, and the fibers are embedded in the powder particles, comprising:
mixing a matrix micropowder with a liquid phase to form a suspension wherein the particle size of the matrix micropowder is less than the particle size of the powder;

spraying the suspension through a nozzle to form droplets comprising the matrix micropowder; and

vaporizing or evaporating a liquid component from the droplets to form the powder in the form of essentially spherical agglomerates.

Claim 49 (Previously Presented): The method according to Claim 48, wherein the liquid phase is further mixed with at least one of a reinforcing fiber or a stiffening fiber having a length less than the particle size of the powder.

Claim 50 (Previously Presented): The method according to Claim 48, wherein the matrix micropowder has an average grain size d_{50} between 3 and 10 μm .

Claim 51 (Previously Presented): The method according to Claim 48, wherein the matrix micropowder has an average grain size d_{50} of 5 μm .

Claim 52 (Previously Presented): The method of Claim 48, wherein the fibers have an average length L_{50} of 20 to 150 μm .

Claim 53 (Previously Presented): The method according to Claim 48, wherein the fibers have an average length L_{50} of 40 to 70 μm .

Claim 54 (Previously Presented): The method according to Claim 49, wherein the matrix micropowder has an average grain size d_{50} between 3 and 10 μm and the fibers have an average length L_{50} of 10 to 100 μm .

Claim 55 (Previously Presented): The method according to Claim 49, wherein the matrix micropowder has an average grain size d_{50} of 5 μm and the fibers have an average length L_{50} of 10 to 80 μm .

Claim 56 (Previously Presented): The method according to Claim 48, wherein the droplets have an average diameter d_{50} of 10 to 70 μm .

Claim 57 (Previously Presented): The method according to Claim 48, wherein the vaporizing or evaporating is carried out while the droplets are moving through a heating segment.

Claim 58 (Previously Presented): A method for the production of a powder comprising essentially spherical particles of an aromatic polyether ketone plastic, comprising: cooling a coarse granulate comprising a plastic matrix material to form brittle, coarse granulates; grinding the brittle, coarse granulates; and separating the ground granulate into a fraction spectrum.

Claim 59 (Previously Presented): The method according to Claim 58, wherein the coarse granulate is a fiber-reinforced plastic matrix material.

Claim 60 (Previously Presented): The method according to Claim 58, wherein the grinding is carried out with a pinned disk mill.

Claim 61 (Previously Presented): The method according to Claim 58, wherein the grinding is carried out with cooling.

Claim 62 (Previously Presented): The method according to Claim 58, wherein the separating is carried out with an air separator.

Claim 63 (Previously Presented): The method according to Claim 58, further comprising:

smoothing the ground granulate.

Claim 64 (Previously Presented): The method according to Claim 63, wherein the smoothing is carried out by embedding or accumulating at least one of microparticles or nanoparticles.

Claim 65 (Previously Presented): A method for producing a powder comprising a first component in the form of essentially spherical powder particles and at least one of a stiffening fiber or a reinforcing fiber, wherein the first component comprises a matrix material, comprising:

cooling a coarse granulate comprising a plastic matrix material to form brittle, coarse granulates;

grinding the brittle, coarse granulates; and

separating the ground granulate into a fraction spectrum.

Claim 66 (Previously Presented): The method according to Claim 65, wherein the coarse granulate is a fiber-reinforced plastic matrix material.

Claim 67 (Previously Presented): The method according to Claim 65, wherein the grinding is carried out with a pinned disk mill.

Claim 68 (Previously Presented): The method according to Claim 65, wherein the grinding is carried out with cooling.

Claim 69 (Previously Presented): The method according to Claim 65, wherein the separating is carried out with an air separator.

Claim 70 (Previously Presented): The method according to Claim 65, further comprising:

smoothing the ground granulate.

Claim 71 (Previously Presented): The method according to Claim 70, wherein the smoothing is carried out by embedding or accumulating at least one of microparticles or nanoparticles.

Claim 72 (Previously Presented): A method for producing a powder comprising essentially spherical particles of an aromatic polyether ketone plastic, comprising:
melting a matrix material;
blowing the melted matrix material through a nozzle to form droplets; and
passing the droplets through a cooling segment.

Claim 73 (Previously Presented): The method according to Claim 72, further comprising:

stirring at least one of stiffening fibers or reinforcing fibers into the melted matrix material before blowing the melted matrix material.

Claim 74 (Previously Presented): The method according to Claim 72, wherein the droplets are formed in a hot gas jet.

Claim 75 (Previously Presented): The method according to Claim 72, further comprising:

separating the cooled droplets into a fraction spectrum.

Claim 76 (Previously Presented): A method for producing a powder comprising a first component in the form of essentially spherical powder particles and at least one of a stiffening fiber or a reinforcing fiber, wherein the first component comprises a matrix material, comprising:

melting a matrix material;

blowing the melted matrix material through a nozzle to form droplets; and

passing the droplets through a cooling segment.

Claim 77 (Previously Presented): The method according to Claim 76, further comprising:

stirring at least of stiffening or reinforcing fibers into the melted matrix material before blowing the melted matrix material.

Claim 78 (Previously Presented): The method according to Claim 76, wherein the droplets are formed in a hot gas jet.

Claim 79 (Previously Presented): The method according to Claim 76, further comprising:

separating the cooled droplets into a fraction spectrum.

Claim 80 (Previously Presented): A method for producing a spatial structure, comprising:

melting the powder according to Claim 38.

Claim 81 (Previously Presented): The method according to Claim 80, wherein melting includes powder-based generative rapid prototyping, selective laser sintering or laser melting.

Claim 82 (Currently Amended): A method for producing a spatial structure, comprising:

melting the powder according to Claim [[38]] 48.

Claim 83 (Previously Presented): The method according to Claim 82, wherein melting includes powder-based generative rapid prototyping, selective laser sintering or laser melting.

Claim 84 (Previously Presented): A molded body obtained by powder-based generative rapid prototyping of the powder according to Claim 38.

Claim 85 (Previously Presented): The molded body of Claim 84, wherein the powder-based generative rapid prototyping is selective laser sintering or laser melting.

Claim 86 (Previously Presented): A molded body obtained by powder-based generative rapid prototyping of the powder according to Claim 38.

Claim 87 (Previously Presented): The molded body of Claim 86, wherein the powder-based generative rapid prototyping is selective laser sintering or laser melting.

Claim 88 (Previously Presented): The molded body according to Claim 84, comprising one or more interior reinforcements.

Claim 89 (Previously Presented): The molded body according to Claim 84, comprising a three-dimensional framework reinforcement.

Claim 90 (Previously Presented): The molded body according to Claim 86, comprising one or more interior reinforcements.

Claim 91 (Previously Presented): The molded body according to Claim 86, comprising a three-dimensional framework reinforcement.

Claim 92 (Previously Presented): A molded body obtained by powder-based generative rapid prototyping of the powder according to Claim 38.

Claim 93 (Previously Presented): The molded body of Claim 92, wherein the powder-based generative rapid prototyping is selective laser sintering or laser melting.

Claim 94 (Previously Presented): The molded body according to Claim 93, comprising one or more interior reinforcements.